

**REMARKS**

Claims 1-18 are pending in this application. By this Amendment, the specification and claim 1 are amended. No new matter is added. Reconsideration of the application is respectfully requested.

The Examiner is respectfully requested to contact the undersigned to schedule a personal interview in order to advance the prosecution if this Amendment does not place the application in condition for allowance.

The specification is amended to correct an error and for greater clarity. Namely, a paragraph starting at page 18, line 8, is amended to change 5% to 10%. As described throughout the specification, Applicants' intention is to keep the ratio of the number of particles having circularity of 0.950 or less to be 10% or less. For example, for exemplary toner 1 described at page 53, line 10 of the specification, the ratio of the number of particle having an average circulating of 0.950 or less is 4.7%. Therefore, Applicants respectfully submit that this change is for consistency only and does not constitute new matter.

The Office Action rejects claims 1-18 under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. The Office Action asserts that the ratio of the number of particles having an average circularity of 0.970 or greater and 0.950 or less cannot be ascertained from the written description. Applicants respectfully disagree.

As clearly stated in MPEP §2163.04, a description as filed is presumed to be adequate, unless or until sufficient evidence or reasoning to the contrary has been presented by the Examiner to rebut the presumption. See, e.g., *In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The Examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. The Examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an

applicant's disclosure a description of the invention defined by the claims. *Wertheim*, 541 F.2d at 263, 191 USPQ at 97.

The Office Action merely states that one of ordinary skill in the art at the time of the invention was made could not use or calculate the ratio data. As stated in MPEP §2163.04 (I), such a general allegation is not a sufficient reason to support a rejection for lack of adequate written description. Therefore, the Office Action fails to present a reasonable basis to challenge the adequacy of the written description or to set forth a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. Therefore, this rejection is improper.

In addition, Applicants respectfully submit that those skilled in the art would naturally understand that the ratio of the number of particles having a circularity of "0.970 or greater" and "0.950 or less" can be calculated based on the number of particles, which are counted when the analysis of the image of particles is conducted using an image analyzing apparatus, as described at page 18, line 17-page 19, line 4 and the examples, which use FPIA as the image analyzing apparatus, disclosed in the specification of this application. Therefore, Applicants respectfully submit that the description is adequate for those skilled in the art to understand the invention defined by the claims.

Accordingly, Applicants respectfully request withdrawal of the rejection.

The Office Action rejects claims 1-18 under 35 U.S.C. §112, second paragraph. The Office Action asserts that the ratio of the number of particles having a circularity of 0.970 or greater and 0.950 or less is vague, indefinite, and confusing and that how this ratio is determined cannot be ascertained from the description. The Office Action also asserts that it is not clear how the fractional values of "3/5 or less" and "7/5 or greater" are determined and how the ratio is affected, especially by a fractional value that is expressed with the qualifier "or less" and "or greater." This rejection is respectfully traversed.

As discussed above, one of ordinary skill in the art would understand how the ratio of the number of particles having a circularity of 0.970 or greater and 0.950 or less can be determined based on the disclosure of the specification and his/her knowledge in the art.

Moreover, Applicants respectfully submit that those skilled in the art would naturally understand that the toner circle-equivalent diameter, which is known as a diameter of a circle having the same area as a projected image of the particle, is also obtained when the analysis of the image particles is conducted. The fraction values of  $3/5$  ( $=0.6$ ) and  $7/5$  ( $=1.2$ ), which are the numbers of particles within ranges corresponding to those which can be obtained based on the analysis of the image of particles, are threshold values. That is, Applicants respectfully submit that these values are used for determining the ratio of the number of particles having specific circularity to solve the problems, for example, described at page 17, line 17-page 18, line 16.

Therefore, Applicants respectfully submit that the claims are clear and definite and would be well understood by those skilled in the art, especially in view of the disclosure. As such, withdrawal of the rejection is respectfully requested.

The Office Action rejects claims 1-18 under 35 U.S.C. §103(a) over U.S. Patent No. 6,746,810 to Suzuki in view of U.S. Patent No. 6,475,689 to Yamazaki, U.S. Patent No. 6,617,091 to Nishimori, and U.S. Patent Application Publication No. 2004/0053154 to Tomita. This rejection is respectfully traversed.

Applicants respectfully submit that none of these references teaches or suggests the features of the claims. In addition, none of these references teaches or suggests any examples that satisfy the conditions recited in the claims.

Claim 1 recites that a circularity of a toner contained in at least the supplementary developer is in the range of 0.940 to 0.980, that a first ratio of a number of particles is 5% or less, wherein the first ratio is defined as a number of particles comprising a circularity of

0.970 or greater of a group of particles comprising a diameter less than or equal to  $3/5$  of a specific circle-equivalent diameter, and that a second ratio of a number of particles is 10% or less, wherein the second ratio is defined as a number of particles comprising a circularity of 0.950 or less of a group of particles comprising a diameter greater than or equal to  $7/5$  times a specific toner circle-equivalent diameter.

The Office Action admits that Suzuki does not specifically teach or suggest the average circularity, but asserts that each of Yamazaki, Nishimori and Tomita teaches the criticality of toner circularity and related shape. Applicants respectfully disagrees.

As evidence, that the applied references do not teach or suggest the recited features, a Declaration under 37 C.F.R. §1.132 is attached, which was executed by one of the inventors of this application. The Declaration explains that none of the applied references teaches or suggests these features.

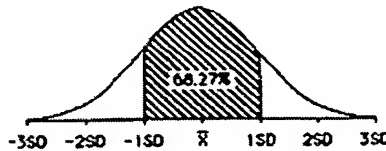
In particular, the Example A-1 of Tomita, which teaches the circularity of toner particles being 0.948, provides 7% in terms of the first ratio, which is outside the range recited in claim 1.

Furthermore, the colored particles 6Y of Yamazaki, having the smallest standard deviation of circularity (i.e., the narrowest range for variation of circularity) in the specific examples discloses in Yamazaki and Nishimori, have an average circularity of 0.956 and standard deviation of circularity of 0.030.

Accordingly, with the proviso that a circularity of a group of particles having diameters in a specific range exhibits the normal distribution when the particles of the group are constituents of a population of particles having various diameters in which a circularity of the particles of the population exhibits the normal distribution, when a group of colored particles having diameters equal to or larger than  $7/5$  x circle-equivalent diameter of the colored particles 6Y of Yamazaki is considered, the ratio (the second ratio as recited in claim

1), of the colored particles, which further have the property of having a circularity of 0.950 (that is slightly smaller than 0.956, and provides the mean value (50%) in the normal distribution of the circularity of the colored particles 6Y of Yamazaki) or less is estimated to be approximately forty and several percentages.

Further, it is generally known that 68.27% of the scores lie within one standard deviation of the mean in the normal distribution.



Accordingly, colored particles, having diameters equal to or larger than  $7/5 \times$  circle-equivalent diameter of the colored particles 6Y of Yamazaki and further having the property of having a circularity of equal to or less than 0.926 (calculated by "mean value" minus "standard deviation", namely,  $0.956 - 0.030$ ), that is smaller than 0.950, is calculated to be approximately 16% (calculated by  $(100\% - 68.27\%) / 2$ ) relative to the total number of the particles having diameters equal to or larger than  $7/5 \times$  circle-equivalent diameter of the colored particles 6Y of Yamazaki.

Therefore, the second ratio calculated for the colored particles 6Y of Yamazaki is in a range of approximately 16 to 40 and several %, which apparently exceeds 10% defined for the second ratio recited in the claims.

Moreover, the executed Declaration provides evidence that the colored particles 6Y of Yamazaki is outside the range recited in claim 1. Although the process used in the experiment inevitably includes a small modification from the disclosure of Yamazaki because Applicants found that it was in fact impossible to reproduce the process as taught by Yamazaki, the composition of the particles formed in the experiment described in the Declaration is essentially similar to that of the colored particles 6Y of Yamazaki. Therefore,

it is believed that the data shown in the executed Declaration is sufficiently compatible with the information to be probative for examination of this application.

Accordingly, Applicants respectfully submit that the alleged combination of references would not have suggested the features recited in claim 1. As such, claim 1 is patentable over the applied references.

Independent claims 14, 17 and 18 recite features similar to those of claim 1. Accordingly, these claims are patentable over the applied references.

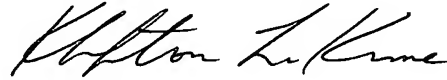
Dependent claims 2-13, 15 and 16 are patentable at least for their dependence on claims 1 and 14, respectively, as well as for the additional features they recite.

Accordingly, withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Klifton L. Kime  
Registration No. 42,733

JAO:KXH/tbh

Attachment:

Petition for Extension of Time  
Request for Continued Examination  
Declaration under 37 C.F.R. §1.132

Date: February 16, 2006

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

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